# 滇东南荨麻科楼梯草属一新系和一新种\*

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摘要:描述了采自云南省东南部楼梯草属一新种——柳叶楼梯草 (Elatostema neriifolia) 和据其为模式建立的一新系——柳叶楼梯草系 (ser. Neriifolia),并讨论了这些新类群和相近类群在形态上的区别,并对柳叶楼梯草的保护等级进行了评估。

关键词: 荨麻科; 楼梯草属; 小叶楼梯草组; 新系; 新种; 中国

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# One New Series with Its Only New Species of *Elatostema* (Urticaceae) from Southeast Yunnan, China

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**Abstract**: One new series of sect. *Weddelia* in the genus *Elatostema*, named ser. *Neriifolia*, and with its only new species *E. neriifolia* from SE Yunnan are described and illustrated here. In addition, the morphological differences between these new taxa and their allies are disscussed and their conservation status is also assessed.

Key words: Urticaceae; Elatostema; Sect. Weddelia; New series; New species; China

The genus *Elatostema* J. R. & G. Forst. is one of the largest genus in Urticaceae. It has approximately 500 species, distributed in tropical and subtropical regions of Africa, Asia and Oceania in the world (Wang, 2012). Two hundred thirty-three species (205 endemic) were found in tropical and subtropical regions in the south of the Qinling Mountains, especially in evergreen broad-leaved forests and other shaded and wet places in China (Wang, 1995, 2012).

Yunnan Province is one of the species diversity

centres for *Elatostema* (Wang, 2003, 2006, 2010a, b, 2011a, b; Wu *et al.*, 2011). Recently, during our research on *Elatostema*, a few specimens from SE Yunnan showed morphological differences from the described species. After studying both living specimens and preserved collections in PE and KUN, a new species was discovered, and our research data were sufficient to warrant the circumscription of a new series within the sect. *Weddelia* of the genus. The new series with the only new species

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are described and illustrated below:

Series Neriifolia W. T. Wang & Zeng Y. Wu, ser. nov.

Ob capitula staminata receptaculis minutis inconspicuis praedita, achenia multi-lineolata et folia semitriplinervia vel trinervia series nova haec est fortasse affinis Ser. Shanglinensibus W. T. Wang & Y. G. Wei, a qua foliis anguste oblongis margine integris, bracteis involucralibus staminatis et pistillatis omnibus apice haud corniculatis, eis staminatis suborbicularibus vel ovatis, eis pistillatis anguste lanceolatis praeclare differt. In Ser. Shanglinensibus, folia ovata vel elliptica, margine dentata, bracteae involucrales staminatae oblongo-naviculares apice etiam corniculatae, et bracteae pistillatae deltoideae apice etiam corniculatae.

Type: E. neriifolium W. T. Wang & Zeng Y. Wu.

Series Neriifolia is a very distinctive series with its staminate capitula which bear minute inconspicuous receptacles, multi-lineolate achenes and semitriplinerved or trinerved leaves. It is similar to Ser. Shanglinensia (Wang, 2012), from which it differs in its narrow-oblong entire leaves, suborbiculate or ovate non-corniculate staminate involucral bracts, and narrow-lanceolate non-corniculate pistillate involucral bracts. In Ser. Shanglinensia, the leaves are ovate or elliptic and dentate at margin, the staminate involucral bracts are oblong-navicular and corniculate at apex, and the pistillate involucral bracts are deltoid and also corniculate at apex (Wang, 1995; Wei and Wang, 2009).

Elatostema neriifolium W. T. Wang & Zeng Y. Wu, sp. nov. (Fig. 1 & 2)

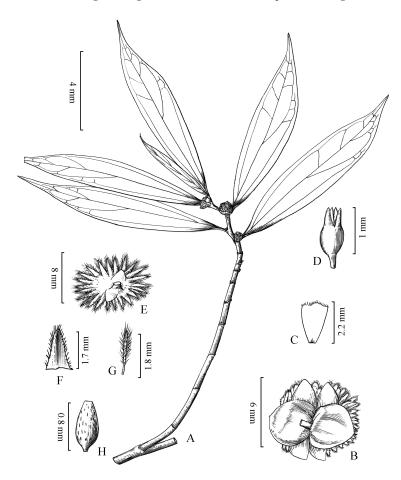


Fig. 1 Elatostema neriifolium W. T. Wang & Zeng Y. Wu. (A) Upper part of flowering staminate stem, (B) staminate capitulum, seen from beneath, (C) staminate bracteole, (D) staminate flower bud, (E) pistillate capitulum, seen from beneath, (F) pistillate bract, (G) pistillate bracteole, (H) achene, (A-D drawn by Ying-Bao Sun from Y. M. Shui & D. G. Wang 21817; E-H drawn by Ying-Bao Sun from GBOWS1266)



Fig. 2 Elatostema neriifolium W. T. Wang & Zeng Y. Wu. (A) habit, (B) pistillate bract, (C) achene, (D) pistillate capitulum, seen from beneath, (E) staminate capitulum, seen from beneath, (F) staminate bracteoles, (G) pistillate bracteoles

Habitu species nova haec est simillima *E. ra-nongensi* Yahara endemico in Thailandia, quod foliis margine supra medium crenatis vel undulatis, acheniis longitudinaliter costatis valde distinguitur.

Holotype: China. Yunnan, Malipo County, Tianbao to Nandong, 19 Nov. 2002, Y. M. Shui & D. G. Wang 21817 (PE) (flowering).

Perennial herb. Stems erect,  $30-40~\rm cm$  tall, above base  $3-4.5~\rm mm$  thick, branched, above densely or sparsely puberulous, below glabrous. Stipules narrowly lanceolate,  $7-10\times0.3-1.2~\rm mm$ , puberulous or subglabrous, with very dense cystoliths c. 0.1 mm long; leaves shortly petiolate, petioles  $1-5~\rm mm$  long; leaf blade thickly papery, narrowly oblong or narrowly oblanceolate,  $5-10\times1-1.7~\rm cm$ , adaxial glabrous, abaxial densely puberulous on veins, cystoliths conspicuous, dense, bacilliform,  $0.1-0.2~\rm mm$  long, trinerved or semitriplinerved, lateral nerves

3-paired, prominent abaxially, base obliquely cuneate, margin entire, apex acuminate. Staminate capitula singularly axillary, c. 6-7 mm in diameter; peduncle c. 1 mm long; receptacle obscure; bracts 6, green, with margin broad white, 2-seriate, outer 2 opposite, suborbicular, c.  $3 \times 3.4 - 3.8$  mm, inner 4, broadly ovate, 3 mm × 2 mm, subglabrous; bracteoles membranous, semihyaline, whitish, obtrapezoid, cuneate-linear or linear,  $2.2 \times 0.1 - 0.4$ mm, apex subtruncate, densely ciliolate. Staminate flower buds subglobose, c. 0.6 mm in diameter, glabrous, apex 4-corniculate; pedicel c. 0.1 mm long. Pistillate capitula singularly axillary, 4-8 mm in diameter; peduncle c. 1 mm; receptacle suborbicular c. 3 mm in diameter, glabrous; bracts 2-seriate, green, outer 2 opposite, broadly ovate, c. 1× 1.8 mm, glabrous, inner c. 30, narrowly triangular, c.  $1.7 \times 0.3 - 0.5$  mm, densely ciliate; bracteoles numerous, very dense, greenish, linear, nearly as long as inner bracts, also densely ciliate. Achene brownish, narrowly ellipsoid,  $0.8 \times 0.2$  mm, densely lineolate.

Elatostema neriifolium is an understory herb, usually occurring in tropical rain forests on limestone, between elevations of 120–170 m, where it is associated with *Pilea basicordata* W. T. Wang ex C. J. Chen, *E. longistipulum* Hand. -Mazz., *E. attenuatum* W. T. Wang, and with some species of Zingiberaceae and Palmae.

#### Distribution and conservation status

Elatostema neriifolium is probably distributed from southeast Yunnan (China) to Vietnam. In China, it mainly occurs along Magebaisha River in Hekou and Maguan County. In Hekou, a population with about 100 individuals occurs in an area of 1 km² and is here regarded as 'Endangered' (EN) according to IUCN red list criteria (IUCN, 2011).

# Additional specimens examined

China. Yunnan: Maguan County, Gulinqing village, Magebaisha River near Xiangyu Travel Station, 22°42′48″ N, 103°58′02″ E, 06 Oct. 2002, Y. M. Shui, W. H. Chen and J. Sh. Sheng 30522 & 30534 (PE); Hekou County, Nanxi village, Magebaisha River, 22°37′38.4″ N, 103°56′38.7″ E, 120 m, 10 Jun. 2010, GBOWS1266 (KUN). Vietnam. Hoang Lien Son: 22 km SE of Lao Cai, 23 Dec. 1964, China- Vietnam Expedition 755 (PE).

## Similar species

Elatostema neriifolium is strikingly similar to E. ranongense Yahara, a species endemic to southwest Thailand, but differs in its entire leaves and multi-lineolate achenes. In E. ranongense, the leaf margin is crenate or undulate in the middle, and the achenes are longitudinally ribbed (Wang, 1995),

whereas *E. neriifolium* has an entire leaf margin and narrowly ellipsoid achenes.

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### References:

- IUCN Standards, Petitions Subcommittee, 2011. Guidelines for Using the IUCN Red List Categories and Criteria. Version 9.0 [S]. Prepared by the Standards and Petitions Subcommittee
- Wang WT (王文采), 1995. Elatostema J. R. & G. Forst [A]. In: Flora Reipublicae Popularis Sinicae (中国植物志) [M]. Beijing: Science Press, 23 (2): 187—317
- Wang WT (王文采), 2003. Notes on *Elatostema J. R. & G. Forst.* (Urticaceae) from Yunnan Province [J]. *Bulletin of Botanical Research* (植物研究), **23**: 257—260
- Wang WT (王文采), 2006. Notes on *Pellionia* and *Elatostema* (Urticaceae) in Southeastern Yunnan [J]. *Bulletin of Botanical Research* (植物研究), **26**: 15—24
- Wang WT (王文采), 2010a. New taxa of *Pellionia* and *Elatostema* (Urticaceae) from China [J]. *Guihaia* (广西植物), **30**: 1—12
- Wang WT (王文采), 2010b. Notes on the genus *Elatostema* (Urticaceae) [J]. *Guihaia* (广西植物), **30**: 713—727
- Wang WT (王文采), 2011a. Six new species of *Elatostema* (Urticaceae) from Gaoligong Shan, Yunnan [J]. *Plant Diversity ang Resources* (植物分类与资源学报), 33:145—156
- Wang WT (王文采), 2011b. Two new species of *Elatostema* (Urticaceae) from southeastern Yunnan [J]. *Guihaia* (广西植物), **31**: 143—147
- Wang WT (王文采), 2012. Nova Classificatio Specierum Sinicarum Elatostematis (Urticaceae) [A]. In: D. Z. Fu et al. Paper Collection of W. T. Wang Vol. 2 [M]. Beijing: Higher Education Press
- Wei YG (韦毅刚), Wang WT (王文采), 2009. Notes on *Elatoste-ma* J. R. et G. Forst. (Urticaceae) from Guangxi [J]. *Guihaia* (广西植物), **29**: 711—718
- Wu ZY (吴增源), Wang WT (王文采), Wang H (王红) et al., 2011. Elatostema densistriolatum sp. nov., E. latistipulum sp. nov. and E. cyrtandrifolium var. hirsutum var. nov. (Urticaceae) from southwest China [J]. Nordic Journal of Botany, 29: 227—232